

## Claims

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- [c1] 1. A storage media for data, said media comprising:  
*Sub A1*  
a substrate;  
at least one plastic film; and  
at least one data layer disposed on said plastic film;  
wherein said data layer can be at least partly read from, written to, or a  
combination thereof by at least one energy field; and  
wherein said energy field comprises at least one of an electric field, a magnetic  
field, and an optical field.
- [c2] 2. The storage media as in Claim 1, wherein said rigid substrate has a Young's  
modulus of at least about 7 GPa.
- [c3] 3. The storage media as in Claim 2, wherein said Young's modulus is at least  
about 70 GPa.
- [c4] 4. The storage media as in Claim 3, wherein said Young's modulus is at least  
about 200 GPa.
- [c5] 5. The storage media as in Claim 1, wherein said substrate comprises at least  
*Sub A2*  
one of metal, glass, ceramic, reinforced plastic, or combinations comprising at  
least one of the foregoing.
- [c6] 6. The storage media as in Claim 1, wherein said plastic film comprises  
embossed surface features.
- [c7] 7. The storage media as in Claim 1, wherein said plastic film comprises  
embossed surface features selected from the group consisting of pits, grooves,  
edge features, asperities, and combinations comprising at least one of the  
foregoing.
- [c8] 8. The storage media as in Claim 1, wherein said rigid substrate comprises a  
*Sub B2*  
glass substrate.
- [c9] 9. The storage media as in Claim 1, wherein the head slap characteristics of the  
*Sub A3*  
storage media containing the at least one plastic film is substantially equivalent

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A3  
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~~to a second storage media not containing the at least one plastic film.~~

[c10] 10.The storage media as in Claim 1, wherein said storage media has a data layer with a coercivity of at least about 1,500 oersted.

[c11] 11.The storage media as in Claim 1, wherein said storage media has a data layer with a coercivity of at least about 3,000 oersted.

[c12] 12.The storage media as in Claim 1, comprising at least one spin coated, spray coated, or spin and spray coated plastic film.

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[c13] ~~13.The storage media as in Claim 1, wherein said plastic film comprises a thermoplastic resin with a glass transition temperature of at least 140 ° C.~~

[c14] 14.The storage media as in Claim 1, wherein said plastic film comprises at least one thermoplastic resin of the group consisting of polyetherimides, polyetheretherketones, polysulfones, polyethersulfones, polyetherethersulfones, polyphenylene ethers, thermoplastic polyimides, and polycarbonates.

[c15] 15.The storage media as in Claim 1, wherein said plastic film comprises at least one thermoset resin comprising embossed surface features.

[c16] 16. The storage media as in Claim 1, wherein said plastic film comprises at least one thermoset resin, wherein the at least one thermoset resin at least partially cured during a process to emboss surface features onto the at least one thermoset resin.

[c17] 17.The storage media as in Claim 1, wherein said plastic film comprises at least one thermoset resin selected from the group consisting of epoxy, phenolic, alkyds, polyester, polyimide, polyurethane, mineral filled silicone, bis-maleimides, cyanate esters, vinyl, and benzocyclobutene resins.

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[c18] ~~18.The storage media as in Claim 1, wherein said thickness is about 0.82 mm to about 1.25 mm.~~

[c19] 19. A storage media, comprising:  
a substrate having a top side and a bottom side;  
at least one plastic film on each of said top side and said bottom side; and

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Sub 5  
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at least one data layer disposed on at least one of said plastic film on each of said top side and said bottom side; and wherein said data layer can be at least partly read from, written to, or a combination thereof by at least one energy field; and wherein said energy field comprises at least one of an electric field, a magnetic field, and an optical field.

[c20]

20. A storage media for data, said media comprising:

a substrate comprising an areal density greater than about 10 Gbits/in<sup>2</sup> and an axial displacement peak of less than about 500  $\mu$  under shock excitation; at least one plastic film comprising a surface roughness of less than about 10 Å and at least one data layer disposed on said plastic film; wherein said data layer can be at least partly read from, written to, or a combination thereof by at least one energy field; and wherein said energy field comprises at least one of an electric field, a magnetic field, and an optical field.

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